



저작자표시-비영리-변경금지 2.0 대한민국

이용자는 아래의 조건을 따르는 경우에 한하여 자유롭게

- 이 저작물을 복제, 배포, 전송, 전시, 공연 및 방송할 수 있습니다.

다음과 같은 조건을 따라야 합니다:



저작자표시. 귀하는 원저작자를 표시하여야 합니다.



비영리. 귀하는 이 저작물을 영리 목적으로 이용할 수 없습니다.



변경금지. 귀하는 이 저작물을 개작, 변형 또는 가공할 수 없습니다.

- 귀하는, 이 저작물의 재이용이나 배포의 경우, 이 저작물에 적용된 이용허락조건을 명확하게 나타내어야 합니다.
- 저작권자로부터 별도의 허가를 받으면 이러한 조건들은 적용되지 않습니다.

저작권법에 따른 이용자의 권리는 위의 내용에 의하여 영향을 받지 않습니다.

이것은 [이용허락규약\(Legal Code\)](#)을 이해하기 쉽게 요약한 것입니다.

[Disclaimer](#)

Master's Thesis of College of Business Administration

The Effect Of Media Coverage And Alliance Experience On Mutual Forbearance

미디어 보도와 제휴경험이 상호자제에 미치는 영향

August 2015

Graduate School of Seoul National University
College of Business Administration

International Business Major
Kim, Dongwook

The Effect Of Media Coverage And

Alliance Experience On Mutual Forbearance

Cho, Theresa s.

Submitting a master's thesis of Business Administration

April 2015

**Graduate School of Seoul National University
College of Business Administration
International Business Major**

Kim, Dongwook

**Confirming the master's thesis written by
Kim, Dongwook
June 2014**

Chair	<u>Park, Choelsoon</u> (Seal)
Vice Chair	<u>Park, Sun Hyun</u> (Seal)
Examiner	<u>Cho, Theresa S.</u> (Seal)

Abstract

According to the mutual forbearance hypothesis, firms tend to be less competitive when they have more markets in common. By using the awareness motivation capability perspective, this study examines how organization' s awareness and motivation can affect its decision to use the mutual forbearance strategy. We hypothesized how media coverage, alliance experience, and type of the alliance moderate the impact of mutual forbearance. We tested those hypotheses with a sample of 10 automobile companies in the U.S.

Keyword: Mutual forbearance, AMC perspective, media coverage, scale and link alliance

Student Number : 2013-20453

Table of Contents

Chapter 1. Introduction.....	3
Chapter 2. Theory and Hypotheses.....	4
Chapter 3. Methods.....	16
Chapter 4. Results.....	21
Chapter 5. Discussion and Conclusion.....	26
Bibliography.....	29
Abstract in Korean.....	33

Chapter 1. Introduction

In strategic management literature, competitive dynamics examines firms placed multimarket competition in order to understand the rivalry–deterrence. According to the mutual forbearance hypothesis (Edwards, 1955), because firms know the high possibility of counterattack by rivals, firms are less likely to be competitive when they are competing in multiple common markets. Existing studies have supported this hypothesis. For example, Karnani and Wernerfelt (1985) conducted multiple case studies of rivalry deterrence of firms that compete in multiple markets. Baum and Korn (1996) found that as a market domain of each firm overlaps, the rate of market entry and exit becomes lower in the

airline industry.

Nevertheless, emphasis of existing studies on conditions when mutual forbearance occurs lead to neglect the reason why firms drive to compete in multifaceted markets even though they have similar capacity (Yu, Subramaniam, and Cannella, 2009). In the vein, we concentrate on the behavioral drivers of the organization. By adopting the awareness motivational capability (AMC) perspective (Chen, 1996; Ma, 1998; Young, Smith, Grimm and Simon, 2000), this study tries to find the antecedents that may affect the decision making process of mutual forbearance strategy. Specifically, we examine the media coverage of a firm's awareness and the experience and type of alliance of its motivation. To capture the competitive action of firms we count the number of competitive actions held by U.S. automobile firms.

Chapter 2. Theory and Hypotheses

2.1. Mutual Forbearance

When firms compete, they not only consider what strategic choices they have but also consider how their rivals will react to such strategic decision. This is why firms behave differently to rivals that compete in various markets and to those that only compete in a single market. In a situation a firm is competing with its rival in multiple markets simultaneously, the rival have more influence on the focal firm's strategic decision. Especially when the focal firm tries to decide whether or not to initiate a competitive action, the presence of multi-market competing rival will have a huge impact.

If we compare the reaction of the rival, when two firms are competing in a single market, the rival does not have many options; it can either do nothing or counter the attack in the given market. But when two firms are competing in multiple markets the rival has many options; it can counter in the market where it was attacked or in worst case scenario the rival firm might initiate a massive counter attack from all of the competing markets, resulting in a total war between them. This is why the rivalry between firms that compete in a multi-market tends to decrease. Mutual forbearance hypothesis suggests that the more contacts across multiple markets

a firm has, the greater its incentive to reduce its aggressive behavior in those markets (Edwards, 1955).

Still there are cases of firms that have multimarket contact present intense rivalry. For example, two global tire companies in the 1970s, Goodyear and Michelin, were competing against each other in many markets including North America and Europe. At the time, Goodyear was the number one tire manufacturing company in the world and Michelin was the third largest. Unlike Goodyear, which was mainly operating in the North America, Michelin dominated the tire market in Europe. In 1969, Michelin decided to increase its presence in North America by constructing a manufacturing plant in Canada. For Goodyear, this was interpreted as a challenge against them. Goodyear retaliated by attacking the European market, which were Michelin's main market. According to the mutual forbearance hypothesis it can be predicted that each firm will reduce their competitive move to its competitor, but Michelin decided to increase the market share in the North America. In the end, the continued competitive action between two firms resulted in a total war between them (Karnani and Wernerfelt, 1985).

In a situation which forbearing can be a much more viable option, why would firms risk going into a total war? According to Golden and Ma (2003) firms might have trouble implementing the mutual forbearance strategy when there are not enough rewards for business units to cooperate and implement the strategy. Because each business unit has different goals, when there are not enough benefits to cooperate, business unit managers will not give up market share or returns for the greater good of the corporation.

2.2 AMC perspective

The AMC perspective has helped us understand the antecedents of firms' decision to initiate competitive actions (Chen, 1996; Chen, Su, and Tsai, 2007; Livengood and Regar, 2010; Yu and Cannella, 2007). But there are not enough studies that focus on the antecedents of mutual forbearance strategy. In what scenario are firms more likely to choose tacit collusion? We believe the AMC perspective can help us understand the logic behind the firm's decision-making process.

According to Chen (1996) there are mainly three drivers of competitive behavior, which are awareness, motivation, and capability. Awareness is focused on the cognitive aspects of the

organization, how well they perceive its rivals or actions. The more they are aware of its rivals the more likely to initiate an action. The motivation represents the variables that will affect the psychological side of the organization to initiate an attack. The more motivation they will have the more likely the firm will initiate a competitive action. Capability represents the ability of the focal firm to implement a competitive action. When the focal firm does not have enough resource or capability to initiate an attack, they are less likely to engage.

Chen et al. (2007) use the AMC perspective to analyze antecedents of perceived competitive tension, each awareness, motivation, and capability were repressed by the size, rival' s attack volume, and rival' s capability to contest. First the scale of the rival will affect the perception of the organization because bigger firms are more recognizable than small firms, leading to greater perceived tension. Secondly the rival' s attack volume will affect the motivation of the organization. As the attack volume is bigger they will be more motivated to initiate an attack and greater competitive tension against their competitor. And finally the rival' s capability to contest will affect the competitive tension. As the rival has more capability to contest, such as similarity of the resource to the focal firm or the amount of control the rival has to the essential resource, the most competitive tension between two firms.

In this study, awareness is identified by the media coverage of both firms, which we believe will enhance the perception of the competitive rivalry between two firms. Motivation is signaled by two variables; alliance experience and the type of alliance, which will affect the motivational side of the firm, lastly the capability will be controlled by the resource of each firm.

2.3. Multimarket contact

In the strategic management literature many empirical studies support the mutual forbearance hypothesis. Gimeno and Woo (1994) have found that firms with more multimarket contacts tend to be conservative for each other, resulting in lower rivalry, which is reflected by relatively higher prices. Baum and Korn (1996) found that the increase in multimarket contact reduces rival's rate of entry into each other's markets, thus minimizing aggressive competitive invasion. Also Yu, Subramaniam, and Cannella (2009) state that in a given country, the greater the multimarket contact between and multinational corporation (MNC) and its rival, the

lesser the competitive aggressiveness of the MNC' s subsidiary in that country.

Hypothesis 1: As firms have more multimarket contact between them, the likelihood of launching competitive actions will be lower.

2.4 Awareness: Media coverage

Media plays a significant role in shaping the strategy of the firm. First media can indirectly affect firms by creating celebrity firms. The media not only covers objective information but sometimes, in order to capture the views of people, they dramatize reality (Zillmann & Bryant, 2002). When they report about firms they want something interesting, this is why they try to find firms that are different from others, firms that have unique characteristics or distinctive identities. This process creates the firm celebrity, which can be a valuable resource for creating a positive image of the firm. Thus a firm can enjoy its celebrity as an intangible asset (Rindova, Pollock, and Hayward, 2014). Second, media can directly affect firms. For example, in 1988, footage of a fishing boat that was killing hundreds of dolphins while catching tuna was broadcasted through US television. This shocking image had made many schools and restaurants boycott tuna, erasing them from their menu. This boycott was continued until the major tuna companies announced that they would only sell dolphin-safe tuna: tunas that have been caught in a way that does not harm the dolphins (Reinhardt and Vietor, 1994; Bednar, Boivie and Prince, 2013).

The media will affect the strategy of firms by affecting the awareness of firms about their rivals. It is more likely for a firm to be aware of the competitive situation with its rival that is covered by the media every day, than that with a rival that is hardly covered. If a firm is not aware of its rival, the firm might not consider its rival' s reaction in the decision-making process, unintentionally initiating an action that would provoke its rival. On the other hand, if a firm is much aware of its rival they will definitely consider the rival' s reaction in the decision-making process. As it is easier to avoid a threat that is highly visible, firms will be less likely to overlook its rival. Also when the media reports the rivalry they will make it more dramatic and interesting to capture the audience, making the competitive tension more critical than reality (Entman,

1989). Thus a firm will be more likely to use mutual forbearance strategy to rivals, whose competition is well covered by the media than those that are not.

Hypothesis2: As firms have more media coverage between them, the impact of mutual forbearance will be stronger.

2.5 Motivation: Alliance experience

Relationship with a competitor can be shaped in various ways. Two firms can be just competitors, competing each other without any other transactions, or two firms can cooperate and compete simultaneously. The strategic alliance between competitors can help each other in various areas such as product development, production, new investment, and marketing (Bengston and Kock, 2000; David and Slocum, 1992). Firms can even learn new technologies or capabilities from their alliance partners (Hamel 1991). Through strategic alliance with their competitors, firms compete and cooperate at the same time. For example, in the Swedish lining industry, Skega Ltd. and Trellex Ltd. are heavy competitors, fighting for every single customer, lowering their prices to take away each other's customer. But at the same time they are cooperators when they develop new technologies. Both firms use each other's laboratories to run projects, increase the efficiency of the R&D and utilize each other's competence (Bengston and Kock, 2000). Also in the automotive industry, Mazda and Ford compete in various markets from pickup trucks to small cars. But on the same time both companies have a co-production plant in Thailand called AutoAlliance, which was established in 1995. The shared production and supplies lead to lower cost and efficiency. Both companies also collaborate in new product development and learn each other's expertise. For example, Mazda has provided Ford with a critical engineering technology for small cars (Automotive News, 2003).

In considering strategic alliance partners, firms choose repeated alliance partner because transaction cost can be also lowered from the mutual trust. In alliance formation process developing contract is time-consuming and expensive. If the partners are new to each other and do not understand well enough to trust each other, they will have to write a detailed contract that prevents the other party from acting opportunistically. But for firms that have experienced each other and formed a mutual trust, the

detailed contract is unnecessary. The familiarity and trust make the process of doing business together less costly. Also implementing joint operation will be easier because they know each other's strategic processes systems and routines and know by experience what their partner is capable of and not capable of (Zollo, Reuer and Singh, 2002). The mutual trust between two firms will reduce the transaction cost, as it will also lower the monitoring cost. Parkhe (1993) found that the presence of prior experience of collaboration between two firms lowered their observation for opportunistic behavior and as a result lowering the level of safeguards in their contracts.

These advantages in prior alliance experience such as less uncertainty and lowered transaction cost from a mutual trust will give reason for firms to consider those firms with alliance experience a promising future alliance partner. When two firms that have multiple markets in common enter a total war, their possibility of becoming future alliance partner will be slim. Thus firms will have more motives to consider tacit collusion with their rivals, who they consider as alliance partner. Also, when two firms have alliance experience, mutual trust will form, and when there is trust between firms, emotion enters into the relationship. As people who have become friends will often try to avoid conflicts (McAllister, 1995), the focal firm will be motivated to use mutual forbearance strategy, reluctant to initiate a competitive action to their competitor, which the focal firm considers it a friend not a foe.

Hypothesis3: As firms have more alliance experience with each other, the impact of mutual forbearance will be stronger.

2.6. Motivation: Alliance type

Not only the volume of alliance experience but also the type of alliance will affect the motivation of the firm in deciding to implement a mutual forbearance strategy. Horizontal alliance can be categorized into scale alliance and link alliance, according to the difference in the contribution of each firm. In scale alliance firms contribute similar resource that are in the same stages in the value chain, enjoying economies of scale, whereas in link alliance firms contribute different resources and capabilities at the different stage of the value chain (Dussage, Garrette and Mitchell, 2000; Hennart, 1988). In 2012 BMW and Toyota teamed up to research on new generation batteries for greener vehicles. Both firms contributed in

the same value chain to develop the new technology, which will increase the performance and capacity of lithium ion batteries. This alliance is an example of scale alliance. Dussage et al. (2000) found that there is more change in outcome to firms that experienced link alliance than scale alliance; there were more reorganization and takeovers between firms in link alliance than in scale alliance. Whereas firms in scale alliance tend to continue without any change for a longer duration. This means that competitors with link alliance will have different competitive behavior than scale alliance.

On the other hand, in scale alliance such as the joint R&D between BMW and Toyota, they are trying to develop a new technology together, which results in more opportunities for joint learning than inter-firm learning. Because they learn more doing together than from each other, they will enjoy more common benefits than private benefits. This will make firms be more cooperative than competitive. And in turn this will give another motive to the firm “not” to initiated competitive actions. In link alliance when one of the firm considers that there are no more skills to learn from its partner the firm will have no more reason to continue the alliance relationship, but in scale alliance firms learn together and use each other resource to enjoy economies of scale, making both firms to consider them as a prominent future alliance partner even when their alliance has been terminated.

Another difference between link alliance and scale alliance is that often the motive of a partner of link alliance is to gain footholds in the other firms markets or business areas. Because firms in link alliance mostly learn new skills and capabilities from its partner firm, they can use that skills and capabilities to gain a foothold in other’ s markets. For example in the case of NUMMI (New United Motor Manufacturing, Inc.) joint venture, Toyota gained knowledge of the automotive industry in United States and successfully expanded its market share. Thus, firms that have experienced link alliance will be less likely to choose mutual forbearance strategy on the other hand firms that have experienced scale alliance will have more motive to initiate mutual forbearance strategy.

Hypothesis 4: The impact of mutual forbearance will be stronger between firms that experienced scale alliance with each other than between firms that experienced link alliance.

Chapter 3. Methods

3.1. Research Design

In order to test the hypotheses, we have investigated 10 largest global automobile manufacturers in U.S. between 2006 and 2008 inclusive. The firms are BMW, Ford, General Motors, Honda, Hyundai, Nissan, Mazda, Subaru, Toyota, and Volkswagen. Daimler and Chrysler, which are also a major competitor in the United States, was excluded from the list because the two companies had been a single company DaimlerChrysler until 2007, a fact that makes it impossible to observe the effect of alliance experience. Also, Fiat was excluded because of missing data. We choose the automobile market because it was easy to identify each market segments from oligopolistic competitors; each company competes in more than one market and has its significant market. For example, BMW has its competitive edge in luxury cars and for Hyundai and Honda, mid-sized car is their strong point.

To analyze competitive actions we used structured content analysis, which is widely used in competitive dynamics studies (Chen and Hambrick, 1995; Ferrier, 2001; Yu et al., 2009). We use the keywords that Yu et al. (2009) had used for identifying the competitive action. The keywords include words such as “attack”, “contest” and “rival”. We searched for every article from 2006 to 2008 in the Automotive News website. We have selected Automotive News because it specialize in only the auto industry and provides more detailed and an extensive news article about the automobile industry and the actions of automobile companies. Other sources such as AutoWeek, Automotive Industries, and Business Week are more focused on automobile reviews for consumers.

3.2. Measures

Competitive action: we counted all of the competitive action that a firm has initiated. When *Automotive News* reports an action, the article typically states the firm that initiated the action and the rival firm that received that action. Because the mutual forbearance only examines the dyad of firms we did not count those actions involves more than 3 firms.

Multimarket contact: Baum and Korn (1999) measured multimarket contact by counting the total number of markets in common is not sufficient. If we want to capture the potential mutual

forbearance between firms, it is important to consider the relative importance of the contact, for example a firm that compete with its competitor in 5 markets of its own 6 markets is more likely to consider the contact important than a firm that competes with the same competitor in 6 market of its 20 markets. But the simple counting measure will imply that the first multimarket contact is less than the second.

Simple counting measure does not consider the difference in significance of each market. It is important to differentiate the market, which the firm considers valuable, and those markets, which the firm do not consider as valuable. Baum and Korn (1999) used the concept of centrality, which is defined as the proportion of airline' s routes that connect with the route in concern (Borenstein, 1989). However, because this study is examining the automobile industry, it is impossible to use the same definition of centrality. Instead of airline' s routes, we calculated the proportion of products that are positioned in a given market. With these conditions we use the following measure to capture multimarket contact between firm i and j at a time t :

$$\text{Multimarket contact}_{ijt} = \frac{\sum_{M_{it}} [C_{imt} \times (D_{imt} \times D_{jmt})] + \sum_{M_{jt}} [C_{jmt} \times (D_{imt} \times D_{jmt})]}{M_{it} + M_{jt}}$$

For all j , $\sum_m (D_{imt} \times D_{jmt}) > 1$

In the measure m denotes the market served by firm i and j , C is the centralities of the product in market m , and D is the indicator variable which is set as 1 when i and j are in the market m at time t , and zero if they are not in the market. For two firms that meet in only one market or less, the multimarket contact between them is zero. We calculated multimarket contact on a yearly basis for each firm using the information from Automotive News Data Center. The Market classification data set is updated every year and lists all the products of 10 automotive companies arranged by their market.

Media coverage: To code the media coverage of firms, we searched for every article that contains both of the names of two companies from Automotive News. Then, in order to reduce the causality issue, we have lagged the time by one year. If the article mentions more than 4 companies or is not mainly about two companies we exclude them. We then simply counted the number of

articles in each year.

Alliance experience: Because the alliance experience regarded as a motive for the firm not to initiate competitive action, it is inappropriate to count all of the number of alliance from the year. Also simply counting the number of an alliance is not sufficient because some alliances tend to last longer than others, thus each alliance will have a different effect on firms (Rothaemel and Deeds, 2006). So we choose to count the years of alliance in a 5-year window. For example, if a firm had two different alliances with its partner, one from 2002 to 2003 and the other from 2002 to 2006, the coding of 2006 alliance experience is 7. We collected my data from Guide to Global Automotive Partnerships, which Automotive News provides a yearly base. We included all of the alliance from link alliance to scale alliance.

Alliance type: The alliance type was collected from Guide to Global Automotive Partnerships from Automotive News. This yearly updated data gives data about the automotive partnership with more than 18 firms. The partnership is categorized into the joint venture, assembly alliance, and technical/parts alliance. We first coded assembly alliance as link alliance and technical/parts alliance as scale alliance, than in order to find out whether the joint venture is link or scale we have searched for relative articles relating the specific content of the alliance. Both link and scale alliance was coded as same as the alliance experience, they were coded by the years when the alliance is established.

Control variables: To rule out other explanations, we controlled for several firm-level characteristics. First prior studies have found that firm's scope can influence the number of competitive action. Firms that have larger scope have greater resource thus they are more likely to engage competitive action than smaller firms. The firm scope was measured as the number of markets that each firm is competing in. Slack resource might be a significant influence in competitive action, so we measured current assets/current liabilities to control for organizational slack (Hambrick, Cho and Chen, 1996). Also, the profitability of firms can also affect the competitive action of firms the more profitable the firm is the more competitive action they can initiate. The profitability was measured as the last year's total revenue. We used COMPUSTAT to collect all of these data.

3.3. Analysis

The unit of analysis in this study is the dyad of automobile firms by year. The sample contains 10 automobiles from 2006 to 2008, thus the data set contains 270 observations ($10 \times 9 \times 3$). Because the sample was collected repeatedly over 3 years, this violates the assumption of observation independence, and this might result in autocorrelation. In order to reduce the danger of autocorrelation, we used generalized least squares (GLS) approach rather than ordinary least squares (OLS). When using panel data, GLS can be used to estimating statistics even when autocorrelation and heteroskedasticity are present. For robustness check, we ran a Paris–Winsten regression with standard errors, and also we ran OLS regression with robust standard errors. They showed similar results.

Chapter 4. Results

Table 1. Descriptive statistics and correlations ($N=270$)

Variables	Mean	s.d.	1	2	3	4	5	6	7
1.Firm scope (number of markets)	6.43	3.89							
2.Slack resource ^b (asset/liability)	0.71	0.84	–						
3.Total revenue ^b	6.24	1.06	0.10	0.35					
4.Multimarket contact	4.62	2.02	0.42	–	0.19				
5.Media coverage	2.93	0.76	0.38	–	–	0.08			
6.Alliance experience	0.55	1.29	0.28	–	–	0.14	0.07		
7.Link alliance	0.26	0.78	0.24	–	0.00	0.20	0.01	0.71	
8.Scale alliance	0.29	0.76	0.21	0.00	0.00	0.03	0.11	0.68	0.41

Table 1 gives the means, standard deviations, and correlations for the variables from this study. We used OLS to calculate the variance inflation factors (VIFs) in order to test the

multicollinearity. All of the values were in the range from 1.08 to 2.15, which is acceptable (Belsley et al., 1980).

Table 2 provides the result of GLS regression analysis of my hypotheses. Model 1 shows the influence of the control variables on the number of the competitive action of firms. Firm scope (number of markets) was estimated as predicted. The more market the firm was competing in, the more competitive action initiated by the firm. On the other hand, the other two control variables; firm revenue and asset/liability turned out to be opposite of what we had expected. This was not consistent with previous studies (Hambrick, et al., 1996; Yu, et al., 2009; Cho and Hambrick, 2006), in which firm slack resource and firm profit was positively related to competitive actions. One explanation is that between 2006 and 2008 North American auto industry was in a downturn, especially the 3 biggest automakers in the United States: General Motors, Ford, and Chrysler. This might have resulted in an opposite correlation between slack resource and competitive actions.

Model 2 tests the hypothesis 1, which is the baseline hypothesis. The result shows that competitive action is significant and it is negative coefficient for multimarket contact ($\beta = -0.21$, $p < 0.005$). As the multimarket contact increases, the competitive action of firms decreases. Thus supports Hypothesis 1. In model 3 to 5, we examined each of the moderating variables, which are media coverage, alliance experience, link, and scale alliance. Model 3 tests the moderating effect of media coverage on mutual forbearance (Hypothesis 2). Although the result showed that the more media coverage they have the stronger impact of mutual forbearance becomes, it was not significant. Model 4 shows the result of Hypothesis 3, which tests the effect of alliance experience on mutual forbearance. The interaction between multimarket contact and alliance experience is negative and significant ($\beta = -0.24$, $p < 0.001$), supporting the argument that the effect of multimarket contact on competitive action between firms strengthens as the alliance experience increases.

Table2. Results of GLS regression analysis (N=270)

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Firm scope (number of markets)	0.09**	0.14***	0.16***	0.05*	0.14***
Slack resource ^a (asset/liability)	-0.02	-0.03	-0.01	-0.02	-0.12
Total revenue ^a	-0.05	0.00	0.00	0.03	0.03
Multimarket contact		-0.21**	-0.24**	-0.11	-0.13*
Media coverage			-0.11		
Alliance experience				1.42***	
Link alliance					2.41**
Scale alliance					2.52***
Media coverage × Multimarket contact			0.00		
Alliance experience × Multimarket contact				-0.24***	
Link alliance × Multimarket contact					-0.38**
Scale alliance × Multimarket contact					-0.51***
Scale alliance × Link alliance					-1.05**
Scale × Link × Multimarket contact					0.18**
Log-likelihood	- 574.5	-569.29	-568.22	-545.39	-569.36
Chi-square	2 9.06**	20.10***	22.42***	76.29***	66.27***

^aLogarithm

Note: * p<0.05, ** p<0.01, *** p<0.001

Model 5 provides tests for the effect of link alliance and scale alliance. Both the interaction terms of link alliance and scale alliance was significant. Also, the interaction term of scale alliance was greater and more significant. But in order to confirm Hypothesis 4 it is necessary to test whether this difference is statistically

significant. So we tested the difference between the interaction terms of the link, and scale alliance. We defined “high–link” and “high–scale” to contain values of one standard deviation above mean value of each link and scale alliance, and “low–scale” and “low–link” to contain one standard deviation below the mean. Then we tested the difference between the slopes of 1. Link alliance was high, but scale alliance was low, and 2. Link alliance was low, but scale alliance was high. The test was significant and thus supported the Hypothesis 4, which predicted that the strengthening effect of alliance experience would be stronger in firms that experienced scale alliance than those experienced link alliance.

Table3.
Difference between slopes of High–Link, Low–Scale and Low–Link, High–Scale

Coefficient	Standard Error	z	p>z	95% Confidence Interval	
0.83	0.41	2.00	0.04	0.01	1.65

Chapter 5. Discussion and Conclusion

In various studies, mutual forbearance has been confirmed both theoretically and empirically (Baum & Korn, 1999; Chen 1996; Gimeno & Woo, 1996; Young et al., 2000). Although there are some studies that examine the contingencies that affect mutual forbearance of firms (Golden and Ma, 2003; Yu et al., 2009), most of the recent studies focus on the implementation of the mutual forbearance strategy. These studies assume that the firms do not have any other motivation to mutually forbear or that they are aware of their rivals in the same level. In this study, we argue that firms might have other reasons to strongly pursue the mutual forbearance strategy. In order to examine the firm’ s decision–making process we used Chen’ s (1996) AMC perspective that focus on the drivers of organization’ s behavior. We used media coverage to examine the awareness side of the organization, used alliance experience to examine the motivation side of the organization and controlled the capability of each firm by slack resources. The Hypotheses were tested by analyzing the database of 201 competitive actions by 10 biggest automobile companies

operating in the United States over 3 years of time. The result showed that the more alliance experience the firm has with its rival the stronger the impact of mutual forbearance becomes. Also, this effect will differ depending on which alliance the firm had experienced between link or scale alliance. The effect of alliance experience will be stronger in firms that experienced scale alliance than those firms that experienced link alliance. These results add to the literature of mutual forbearance that in some situations firms have more motive to initiate the mutual forbearance strategies and that the effect of the rivalry deterrence created by multimarket contact depends on the alliance experience between firms.

The hypothesis 2, which tested the effect of media coverage on mutual forbearance was not significant. We assumed that in the organization's decision-making process firms are heavily affected by the media, but this result shows us that this effect might not be strong as we have assumed. The result might show that firms receive their information about their rivals from other sources than the media. Whereas the general public does not have much source other than the media to obtain information about the competition of firms, firms have a various source of information other than the media such as reports from their employees or outside sources such as consulting firms. But this does not mean that media has no effect on firm behavior. In this research, the firms selected were 10 biggest automobile companies that are operating in U.S., so it might be possible that all of the firms are already much aware of each other. If the firms chosen were small firms that have less visibility, the result might be different.

This study has several limitations that can be overcome in future studies. First the Automotive News was used not only as the source of competitive action, but also as the source of media coverage of firms. The result of the effect of media coverage would have been more robust if we used multiple sources of magazines, those reading material that managers tend to read (Business Week, or Fortune). Second although we used the awareness motivation capability perspective, we did not include the capability in the hypothesis and instead controlled it by slack resources. Future studies can include the perceived capability side of the AMC perspective in the hypothesis. For example using the CEO hubris literature we can argue that when the CEO has higher hubris, the capability of its rival might be perceived to be lower. Also being confident in their own company's resource and capability, the firm will be less likely to implement the mutual forbearance strategy. Third, because of missing values, the time frame was limited from

2006 to 2008. Although this may not seriously affect the result of the analysis, more robustness is required to increase the time frame in the future study. Fourth, a business unit that the alliance was formed can affect the motivation of firms. Because for each company some business units are more important than others, an alliance concerning an important business unit will have a stronger effect on mutual forbearance strategy than an alliance concerning an insignificant business unit. For example in recent years Nissan has been concentrating on the hybrid and electric vehicles, thus alliance in these business units will be considered more important than alliance relating diesel engines.

To conclude, by observing the behavioral drivers of the organization, this study provides new insight on the contingencies that affect the mutual forbearance strategy of firms. This study can be a floodgate to open up a new research stream about the effect of variables that can change organization's behavior in the mutual forbearance strategy. The finding in this study also confirms that when the organization has more motivation to mutually forbear they will be more likely to use the mutual forbearance strategy than others.

Bibliography

- Automotive News*. 2003. Ford and Mazda: A lesson in cooperation. June.16
- Baum, Joel AC, and Helaine J. Korn. 1996. Competitive dynamics of interfirm rivalry. *Academy of Management Journal* 39.2: 255–291.
- Baum, Joel AC, and Helaine J. Korn. 1999. Dynamics of dyadic competitive interaction." *Strategic Management Journal* 20.3: 251–278.
- Bednar, Michael K., Steven Boivie, and Nicholas R. Prince. 2013. Burr under the saddle: How media coverage influences strategic change." *Organization Science* 24.3: 910–925.
- Bengtsson, Maria, and Sören Kock.2013. "Coopetition" in business Networks to cooperate and compete simultaneously. *Industrial Marketing Management* 29.5:411–426.
- Berger, Ida E., and Andrew A. Mitchell. 1989. The effect of

advertising on attitude accessibility, attitude confidence, and the attitude-behavior relationship. *Journal of Consumer Research*: 269–279.

Beasley, M.S. 1996. An empirical analysis of the relation between the board of director composition and financial statement fraud. *Accounting Review* 71.4: 443–465.

Borenstein, Severin. 1989. Hubs and high fares: dominance and market power in the US airline industry. *The RAND Journal of Economics*: 344–365.

Chen, Ming-Jer, and Donald C. Hambrick. 1995. Speed, stealth, and selective attack: How small firms differ from large firms in competitive behavior. *Academy of Management Journal* 38.2 (1995): 453–482.

Chen, Ming-J. 1996. Competitor analysis and interfirm rivalry: Toward a theoretical integration. *Academy of Management Review*, 21: 100–134.

Chen, Ming-Jer, S. U. Kuo-Hsien, and Wenpin Tsai. 2007. Competitive tension: The awareness-motivation-capability perspective. *Academy of Management Journal* 50.1: 101–118.

Cho, Theresa S., and Donald C. Hambrick. 2006. Attention as the mediator between top management team characteristics and strategic change: The case of airline deregulation." *Organization Science* 17.4: 453–469.

David, Lei, Slocom, John W. Jr.: Global strategy, Competence-Building and Strategic Alliances. *California Management Review* 35, 81–97 (1992).

DeAngelo, Harry, Linda DeAngelo, and Douglas J. Skinner. 1994. Accounting choice in troubled companies. *Journal of Accounting and Economics* 17.1: 113–143.

Dussauge, Pierre, Bernard Garrette, and Will Mitchell. 2000. Learning from competing partners: outcomes and durations of scale and link alliances in Europe, North America and Asia. *Strategic Management Journal* 21.2: 99–126.

Dussauge, Pierre, Bernard Garrette, and Will Mitchell. 2004. Asymmetric performance: the market share impact of scale and link

alliances in the global auto industry." *Strategic Management Journal* 25.7: 701–711.

Edwards, C. D. 1955. Conglomerate bigness as a source of power. In G. J. Stigler (Ed.), *Business Concentration and Price Policy*: 331–352. Princeton, NJ: Princeton University Press.

Entman, Robert M. 1989. How the media affect what people think: An information processing approach. *The Journal of Politics* 51.2: 347–370.

Ferrier, Walter J. 2001. Navigating the competitive landscape: The drivers and consequences of competitive aggressiveness. *Academy of Management Journal* 44.4: 858–877.

Gimeno, Javier, and Carolyn Y. Woo. 1996. Hypercompetition in a multimarket environment: The role of strategic similarity and multimarket contact in competitive de-escalation. *Organization Science* 7.3: 322–341.

Gimeno, Javier, and Carolyn Y. Woo. .1999. Multimarket contact, economies of scope, and firm performance. *Academy of Management Journal* 42.3: 239–259.

Golden, Brian R., and Hao Ma. 2003. Mutual forbearance: The role of intrafirm integration and rewards. *Academy of Management Review* 28.3: 479–493.

Hambrick, D.C., T. S. Cho, and M–J. Chen. 1996. The influence of top management team heterogeneity on firms' competitive moves. *Administrative Science Quarterly*: 659–684.

Hamel, Gary. 1991. Competition for competence and interpartner learning within international strategic alliances. *Strategic Management Journal* 12.S1: 83–103.

Hennart, Jean-Francois. 1988. A transaction costs theory of equity joint ventures. *Strategic Management Journal* 9.4: 361–374.

Karnani, Aneel, and Birger Wernerfelt. 1985. Multiple point competition. *Strategic Management Journal* 6.1: 87–96.

McAllister, Daniel J. 1995. Affect-and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal* 38.1: 24–59.

Miller, Danny, and Ming-Jer Chen. 1994. Sources and consequences of competitive inertia: A study of the US airline industry. *Administrative Science Quarterly*: 39.1: 1–24.

Ocasio, William. 1997. Towards an attention-based view of the firm. *Strategic Management Journal* 18.S1: 187–206.

Parkhe, Arvind. 1993. “Messy” research, methodological predispositions, and theory development in international joint ventures. *Academy of Management Review* 18.2: 227–268.

Rindova, Violina P., Timothy G. Pollock, and Mathew LA Hayward. 2006. Celebrity firms: The social construction of market popularity. *Academy of Management Review* 31.1: 50–71.

Rothaermel, Frank T., and David L. Deeds. 2006. Alliance type, alliance experience and alliance management capability in high-technology ventures." *Journal of Business Venturing* 21.4: 429–460.

Reinhardt, Forest, and Richard Vietor. 1994. Harvard Business School Case no. 794–128. Cambridge, Massachusetts. *Harvard Business School Press*. Starkist (B): 794–139.

Tieying, Yu, Mohan Subramaniam, and Albert A. Cannella. 2009. Rivalry deterrence in international markets: Contingencies governing the mutual forbearance hypothesis." *Academy of Management Journal* 52.1: 127–147.

Wall Street Journal. 1990. Fare game: Airlines may be using a price-data network to lessen competition. June 28: A1–A8.

Young, Greg, Ken G. Smith, Cutis M. Grimm and Daniel Simon. 2000. Multimarket contact and resource dissimilarity: A competitive dynamics perspective. *Journal of Management* 26.6: 1217–1236.

Yu, Tieying, and Albert A. Cannella. 2007 Rivalry between multinational enterprises: An event history approach. *Academy of Management Journal* 50.3: 665–686.

Livengood, R. Scott, and Rhonda K. Reger. 2010. That's our turf! Identity domains and competitive dynamics. *Academy of Management Review* 35.1: 48–66.

Zillmann, Dolf, and Jennings Bryant. 2002. Entertainment as media effect. *Mcquail's Reader in Mass Communication Theory*: 406.

Zollo, Maurizio, Jeffrey J. Reuer, and Harbir Singh. 2002. Interorganizational routines and performance in strategic alliances. *Organization Science* 13.6: 701–713.

국문초록

상호자제 이론에 의하면 기업들은 많은 시장을 공유할수록 경쟁이 약화된다고 한다. 이 논문에서는 AMC(awareness, motivation, capability) Perspective의 관점에서 기업의 의식과 동기가 상호자제 전략을 사용하도록 결정하는데 있어서 영향을 미치는지에 대해 연구를 하였다. 미디어 보도와 제휴 경험이 상호자제의 효과에 영향을 미칠 것이라고 가정하여 미국의 10가지 자동차 회사를 중심으로 연구하였다.